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ABSTRACT

This Student Learning Outcomes Assessment Report was intended to inform the Board of Trustees, the college community, and the public about the achievements of students enrolled in credit classes at Prince George's Community College (PGCC). Part I contains an executive summary and a discussion of the report's institutional impact. Part II includes common indicators of student learning outcomes, which consist of general education, student persistence, graduation rates, transfer to senior institutions, academic performance after transfer, licensure and certification examination results, graduate employment, graduate survey findings, and student evaluation of teaching. The report then discusses the institutional indicators of developmental education and course pass rates, concluding that though PGCC graduates recognize the value of their education, student persistence is quite low and transfer rates are declining. Course pass rates are high, yet the majority of students are deficient in at least one skill area. However, licensure rates and graduate employment remain high, as does the level of student satisfaction with the school and its teachers. Report findings have resulted in the appointment of a college-wide retention committee. (YKH)

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ED 414 966

Student Learning Outcomes Assessment Report

Submitted to the
Maryland Higher Education Commission

PRINCE GEORGE'S
COMMUNITY COLLEGE

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Report BT96-5

December 1995

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PRINCE GEORGE'S COMMUNITY COLLEGE
Office of Institutional Research and Analysis

STUDENT LEARNING OUTCOMES ASSESSMENT REPORT

Board of Trustees Report BT96-5

December 1995

Introduction

Since its founding in 1958, Prince George's Community College has monitored the achievements of its students and it continues to do so today. Faculty evaluate student accomplishments in the classroom, laboratory, clinical site, and athletic field. Instructional divisions and departments monitor their courses and programs for effectiveness. The college's Office of Institutional Research and Analysis completes several studies each year examining student achievement, with the results shared with top administration, faculty, and the college's governing board.

This report summarizes the findings of several ongoing assessment processes. The report format follows guidelines issued by the Maryland Higher Education Commission. It is intended to inform the Board of Trustees, the college community, and the public about the achievements of students enrolled in credit classes at PGCC. The report is testimony to the college's commitment to an assessment program that reflects the campus mission, provides public accountability, leads to institutional improvement, and enhances student learning.

Part I

Executive Summary and Institutional Impact

This report highlights the findings from numerous campus outcomes assessment activities, including analyses of general education, student persistence, graduation rates, transfer to senior institutions, licensure examination results, graduate employment, and developmental education. The college's assessment efforts have led to revisions to policy and implementation of several programs designed to enhance student achievement, many of which are described in Part II of this report.

The most recent development spurred by the college's analysis of student outcomes is appointment by the president of a collegewide retention committee. The committee has several charges, including: (1) review findings from the 1988-89 retention committee, (2) conduct a comprehensive review of the community college retention literature, (3) review existing institutional research on student progress and achievement, (4) identify campus strengths and weaknesses relating to factors associated with student persistence, including analysis of current PGCC retention programs, (5) determine retention goals, (6) devise strategies to accomplish goals, (6) establish priorities for resource allocation to implement strategies, and (7) identify performance indicators to assess effectiveness of retention activities.

Part II

Common Indicators

This section presents student outcome indicators mandated for inclusion in this report by the Maryland Higher Education Commission. Following a tabular presentation of the data, the recent trend is analyzed and the college's response, if any, is described.

General Education

Prince George's Community College believes all degree-seeking students should be able to communicate effectively, think critically, understand and interpret numerical data, understand the scientific method, appreciate cultural diversity, and value the fine and performing arts. The college attempts to ensure that all degree-seeking students meet these general education goals by requiring students to earn a minimum number of credit hours in specified subject areas.

In lieu of expensive evaluation procedures such as standardized testing, portfolio assessment, or personal interviews, the college relies on the individual assessments of its graduates as to the level of achievement of its general education mission. Graduates are asked in the annual follow-up survey to rate the extent to which PGCC attendance helped them achieve ten goals of general education.

Analysis. The response pattern has been consistent over the eight years the questions have been asked. Graduates report that their experiences at PGCC increased their enjoyment of learning, clarified their educational and career goals, and enhanced their self confidence. Graduates as a group have indicated that their PGCC attendance helped them more than a fair amount in developing their writing and in improving their understanding of science. The college has been less successful in imparting knowledge of other cultures and appreciation of the fine arts.

Planning for Innovation and Change. Partly in response to the relatively low ratings of student learning about other cultures, the college revised its graduation requirements for the Associate degree to include a three-credit requirement in cultural diversity. All degree candidates must complete a course from an approved list including courses offered in anthropology, literature, foreign languages, geography, history, philosophy, political science, and speech communication. Although not currently assessed by the survey instrument, the college has also added a computer literacy requirement for all degree candidates. All future degree recipients will have to demonstrate basic understanding of computers and information systems through appropriate coursework.

Achievement of General Education Objectives Graduate Self-reported Ratings, Five-point Scale			
	FY92 (N = 386)	FY93 (N = 344)	FY94 (N = 328)
Enjoyment of learning	3.91	3.92	4.04
Goal clarification	3.88	3.87	3.92
Self confidence	3.89	3.85	3.89
Science understanding	3.42	3.28	3.50
Writing improvement	3.47	3.47	3.48
Mathematics improvement	3.20	3.17	3.28
Reading comprehension	3.30	3.37	3.26
Attentiveness to news	3.19	3.05	3.02
Knowledge of other cultures	2.94	2.91	2.88
Appreciation of fine arts	2.73	2.52	2.70

Student Persistence

To increase the college's understanding of student attendance patterns, progress toward degree completion, and eventual goal achievement, the Office of Institutional Research and Analysis has instituted a series of longitudinal cohort analyses following the experiences of students entering the college in fall 1990, 1991, and 1992. The status of the fall 1990 entering cohort will be summarized in this section.

A total of 2,643 students entered PGCC as first-time college students in fall 1990. Only 61 percent returned in spring 1991, although an additional 12 percent would enroll at PGCC in a later semester during the five-year period under study. Over time, the proportion of the initial entering cohort still attending PGCC declined steadily. By spring 1995, only 269 or 10 percent of the 2,643 students entering in fall 1990 were still enrolled at PGCC. The table at the top of the next page displays term-by-term attendance of the 1990 cohort for all 20 terms through summer session II of 1995.

Fall 1990 Entrants, Attendance by Term				
	Students Attending Specified Term		Students Attending Specified or Subsequent Term	
	Number	Percent	Number	Percent
Fall 1990	2,643	100%	2,643	100%
Spring 1991	1,614	61%	1,919	73%
Summer I 1991	267	10%	1,559	59%
Summer II 1991	160	6%	1,538	58%
Fall 1991	1,175	44%	1,524	58%
Spring 1992	968	37%	1,335	51%
Summer I 1992	187	7%	1,092	41%
Summer II 1992	115	4%	1,070	41%
Fall 1992	727	28%	1,056	40%
Spring 1993	595	23%	911	35%
Summer I 1993	125	5%	736	28%
Summer II 1993	92	3%	720	27%
Fall 1993	462	17%	694	26%
Spring 1994	344	13%	569	22%
Summer I 1994	84	3%	454	17%
Summer II 1994	58	2%	440	17%
Fall 1994	326	12%	427	16%
Spring 1995	269	10%	302	11%
Summer I 1995	61	2%	91	3%
Summer II 1995	46	2%	46	2%

How much progress had these students made during the five years since their initial enrollment at PGCC? One measure is cumulative credits earned. Nearly 27 percent of the students had earned at least 30 credits. But 976, or 37 percent, had

earned fewer than six credits. Nearly a fifth of the students entering in fall 1990 had yet to earn a single credit by the end of spring 1995. These students may have passed developmental courses, which do not award credit, but failed or withdrew from any credit classes they may have taken. The table below shows the cumulative credits earned at the end of each major term during the study period.

Cumulative Credits Earned by Fall 1990 Entrants End of Fall and Spring Terms, 1990-1995										
Total Credits	Fall 90	Spr 91	Fall 91	Spr 92	Fall 92	Spr 93	Fall 93	Spr 94	Fall 94	Spr 95
0	846	669	592	572	548	540	524	519	508	506
1 - 5	814	613	546	521	502	495	489	482	476	470
6 - 11	667	573	514	458	427	405	392	395	393	387
12 - 17	315	357	318	298	276	265	265	245	244	245
18 - 23	1	242	216	211	208	194	184	194	182	186
24 - 29	0	150	170	152	149	154	146	150	146	138
30 - 44	0	39	248	264	279	276	277	261	259	258
45 - 59	0	0	39	144	172	183	192	199	212	201
60+	0	0	0	23	82	131	174	198	223	252

Implementation of the Transfer Student System (TSS) component of the Student Outcome and Achievement Report (SOAR) produced by the Maryland Higher Education Commission permits meaningful analysis of student outcomes for the fall 1990 cohort as of spring 1994. (More recent transfer data were not yet available.) Earlier research office studies have documented the primacy of transfer over graduation as a conventional outcome measure at PGCC. Indeed, the incidence of transfer is twice that of graduation. Thus, attempting to assess student outcomes without adequate information concerning transfer is unwise. While the Commission's TSS data is restricted to public colleges and universities in Maryland, and thus misses transfers out of state or to independent institutions, prior survey research suggests that typically 90 percent of PGCC transfers continue at in-state public colleges. Thus, acknowledging that transfer will be somewhat underestimated (and the "drop out" rate thus overstated), the college can make an assessment of the outcomes of the entering class of 1990. The table at the top of the next page summarizes the outcomes of these students four years after they began college.

Student Outcomes After Four Years Outcomes as of the End of Spring 1994 of Students Entering in Fall 1990		
Outcome	Number	Percent
Award and transfer	54	2%
Transfer, no award	214	9%
Award, no transfer	83	4%
Sophomore w/2.0+ GPA	314	13%
Achievers	665	28%
Enrolled Spr 94 <30 credits/2.0	175	7%
Non-achievers	1,547	65%
Total degree-seeking students	2,387	100%
Special motive (excluded from above)	256	

Analysis. A total of 256 of the 2,643 first-time college students entering PGCC in fall 1990 had short-term, non-degree goals and are excluded from the outcomes statistics reported here. Of the 2,387 degree-seeking students, 665 or 28 percent had graduated, transferred, or attained sophomore status in good standing after four years. Seven percent were still enrolled in spring 1994. Sixty-five percent, or 1,547 students, had discontinued their PGCC studies without graduating or attaining sophomore status, and did not appear on the TSS data files used as evidence of transfer.

The initial finding that only 28 percent of the degree-seeking students had achieved success (defined as graduating, transferring, or attaining sophomore status in good academic standing) prompted further research by the college. Several factors possibly related to student success were examined. The student persistence data

showing attendance by term suggested strongly that getting off to a good start was important for eventual achievement of student goals. This hypothesis was supported by the four-year outcome data. A majority (54 percent) of the students attending each of the first three major terms (fall 1990, spring 1991, and fall 1991) qualified as achievers by the definition used here. In contrast, students attending three or more terms but not all of the first three had an achievement rate of 22 percent.

Outcomes After Four Years, by Attendance Pattern Degree-seeking Students Entering in Fall 1990			
Outcome	"Good Start" (First 3 Terms)	3 or More Other Terms	1 or 2 Terms
Award and transfer	5%	1%	0%
Transfer, no award	16%	5%	4%
Award, no transfer	7%	4%	0%
Sophomore w/2.0+ GPA	26%	13%	<1%
Achievers	54%	22%	4%
Enrolled Spr 94 <30 credits/2.0	8%	23%	2%
Non-achievers	38%	55%	94%
Total degree-seeking students (100%)	1,030	309	1,048

Previous research office studies had found that mathematics ability was a key predictor of success, a finding consistent with much national literature. Exploratory studies at PGCC had suggested that students needing remediation in mathematics and at least one other area--reading or English composition or both--were at greatest risk of not succeeding. This proved true for the fall 1990 cohort. Only 11 percent of the students identified as needing developmental courses in mathematics and at least one other area were classified as achievers after four years. In contrast, students with no developmental needs achieved at a rate of 44 percent. Adding in persisters--students

enrolled at PGCC the last term of the study period--found half of the students not needing remediation successful, compared to only 20 percent of the "developmental math plus" group. Among full-time students, 56 percent of the non-developmental students--compared to 17 percent of the developmental math plus students--had graduated, transferred, or attained sophomore status in good standing within four years.

Student Outcomes After Four Years, by Developmental Need
Outcomes as of the End of Spring 1994 of Students Entering in Fall 1990

Outcome	No Developmental Needed		Developmental Math Plus Dev. Reading &/or English	
	Total	Full-time	Total	Full-time
Award and transfer	4%	7%	<1%	1%
Transfer, no award	17%	24%	2%	4%
Award, no transfer	5%	6%	1%	2%
Sophomore w/2.0+ GPA	18%	19%	7%	9%
Achievers	44%	56%	11%	17%
Enrolled Spr 94 <30 credits/2.0	6%	4%	9%	7%
Non-achievers	50%	40%	80%	76%
Total degree-seekers (100%)	949	536	628	281

Achievement rates were calculated for several academic variables, each of which appeared to be associated with student success. The more terms a student attended, and the more credits carried each term, the higher the achievement. Students who attended without interruption had higher achievement rates than students who had "stopped out." And students who were always in good academic standing had higher achievement rates than those who attended one or more terms on academic probation or restriction.

Percent Achievers, by Academic Characteristics			
	Number of Students	Percent of Cohort	Percent Achievers
Mean credit load 15+	104	4%	59%
12 - 14 credit hours	669	28%	43%
9 - 11 credit hours	558	23%	37%
6 - 8 credit hours	544	23%	19%
< 6 credit hours	512	21%	4%
No remediation needed	949	40%	44%
Remediation required	1,249	52%	19%
Not assessed	189	8%	10%
Attended 7 - 8 major terms	276	12%	72%
5 - 6 terms	440	18%	55%
3 - 4 terms	623	26%	31%
1 - 2 terms	1,048	44%	4%
Continuous enrollment	809	34%	58%
Interrupted enrollment	1,578	66%	13%
Always in good standing	849	36%	58%
At least one term not g.s.	1,538	64%	12%

The table above shows the achievement rates of various cohort subsamples defined by each variable individually. But in reality, the factors inhibiting or facilitating academic success are cumulative and interactive. One way of seeing this is demonstrated by the table on the next page, created by adding criteria one at a time, steadily decreasing the size of the sample by more narrowly defining it. Beginning with the total degree-seeking cohort of 2,387, that collectively generated a 28 percent achievement rate, the addition of each additional criterion raised the achievement rate substantially. The sub-sample of all full-time degree-seeking students, accounting for nearly a third of the total cohort, had an achievement rate of 45 percent. Nearly three-fifths of the full-timers who were tested and did not need remediation had graduated, transferred, or attained sophomore status in good

standing. Over four-fifths of the full-timers with adequate skills at entry who attended three or more major terms were successful. Nine in ten full-timers with adequate skills who were continuously enrolled for three or more terms were classified as achievers. *Ninety-six percent* of the degree-seekers who attended full-time, had college-level skills at entry, attended three or more terms without interruption, and were always in good academic standing, succeeded. For those students who came to the college with an adequate academic background, were able to make a commitment to full-time, uninterrupted study, and who studied sufficiently to earn passing grades, success was almost certain. The explanation for the poor overall achievement rates at PGCC is that so few of the college's students fit this profile.

Percent Achievers, by Cumulative Academic Characteristics			
Cumulative Criteria Sub-samples	Number of Students	Percent of Cohort	Percent Achievers
All degree-seeking students	2,387	100%	28%
▸Mean term credit load 12+	773	32%	45%
▸No remediation required	414	17%	59%
▸Attended 3 + major terms	249	11%	83%
▸Continuously enrolled	194	8%	90%
▸Always in good standing	169	7%	96%

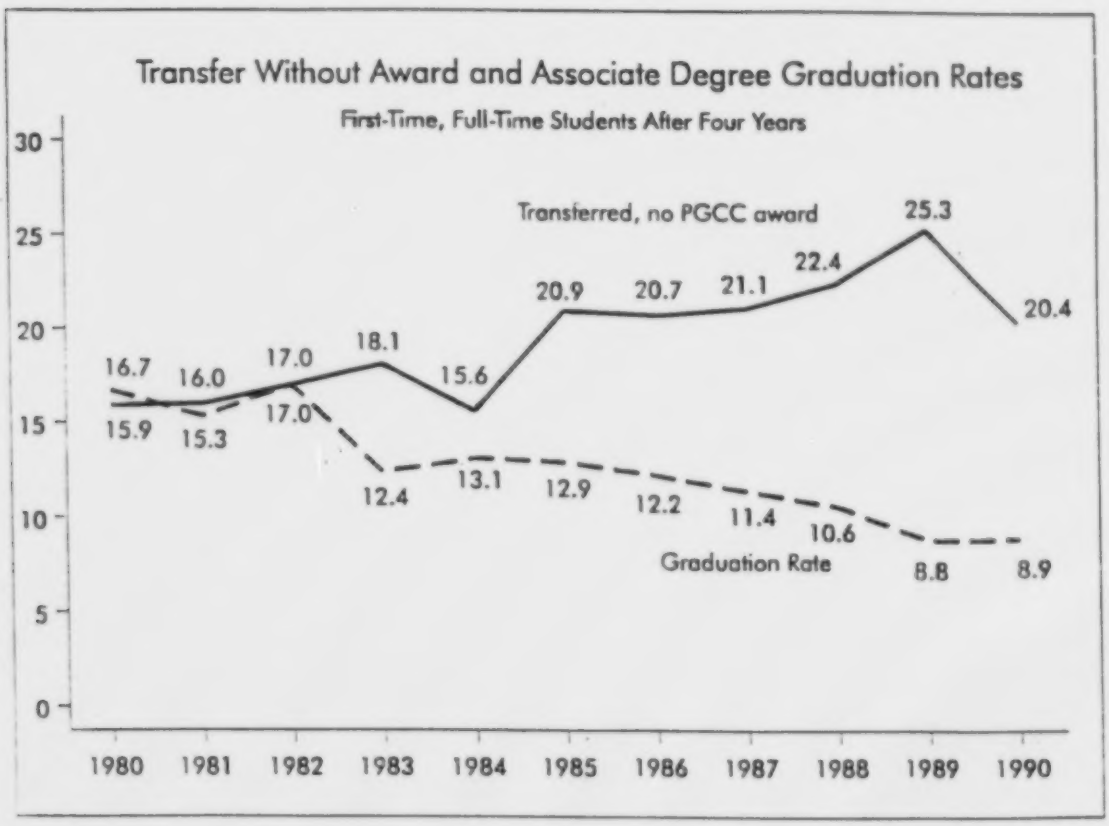
In summary, longitudinal cohort analysis, or following a group of entering students over time, has provided a clearer understanding of student enrollment and progress than cross-sectional studies. Nearly two-thirds of the college's degree-seeking students fail to graduate, transfer, or attain sophomore status in good standing within four years. Persisting through the second and third major terms after entry substantially improved the chances of success, while deficiencies in basic college skills, part-time attendance, interruptions in enrollment, and poor grades hampered achievement. These initial findings from the study of the fall 1990 entering cohort will be supplemented by multivariate analysis currently underway.

Planning for Innovation and Change. Early findings from the longitudinal tracking of the fall 1990 entering cohort have prompted additional research, particularly into the role that remediation plays in student progress. In addition to this and the multivariate analysis of the outcomes of 1990 entering students, the research office plans to follow the progress of students entering in fall 1991 and 1992, adding survey findings

to the tracking data to enhance the college's understanding of student performance. This information will be shared with the newly appointed collegewide retention committee, charged with developing strategies for increasing student persistence at the college.

Graduation Rates

What percentage of PGCC students graduate, and how does this compare with peer colleges? Analyses of enrollment and degree files by staff at the Maryland Higher Education Commission provide one answer. These analyses report the number and percentage of first-time, full-time students graduating or transferring to a Maryland senior institution four years after entering state community colleges. The percentages of full-time entrants earning Associate degrees or transferring to a senior institution without graduating from PGCC for 11 cohorts of fall entrants (1980 through 1990) are shown in the graph below:



The four-year graduation rate of students entering PGCC as full-time students in fall 1990 was 8.9 percent, the second-lowest four-year graduation rate on record. The graduation rate of fall full-time entrants had declined steadily since the 1984 cohort's rate of 13.1. PGCC's graduation rate for full-timers in the 1990 cohort was higher than the comparable rate for Montgomery College (7.8), but was notably lower than the rates for Essex (22.9), Anne Arundel (22.7), and Catonsville (18.3) community colleges.

Analysis. As shown in the graph, concurrent with the decline in graduation rates PGCC had experienced strong growth in the transfer rate to senior colleges and universities in Maryland. Indeed, the *combined* transfer and graduation rate for the 1989 cohort was the highest on record at PGCC. However, the percentage of full-time students transferring without earning an award at PGCC fell nearly five percentage points for students entering PGCC a year later.

Planning for Innovation and Change. Concerns about low graduation rates prompted creation of the longitudinal cohort files now being used to track fall entering classes. These files permit detailed analyses of the term-by-term performance of each cohort, and of subgroups of students within each cohort. More advanced, multivariate analysis has commenced to further explore the correlates of student success. Such studies may suggest policy revisions and new programs to better assist students in meeting their degree goals. The college already has in place an array of student support services, including mentoring and tutoring programs, to promote student persistence. PGCC expends approximately $500,000 a year on such services for underprepared students, not counting the costs of placement testing or remedial instruction.

Transfer to Senior Institutions

As noted above, the rate of transfer to senior institutions exceeds the rate of graduation at PGCC. Where do PGCC transfer students go to continue their education? Using statewide fall enrollment reporting systems, staff at the Maryland Higher Education Commission generate a report each year showing the fall-to-fall enrollment migration of students among Maryland public colleges and universities. The resulting "transfer matrix" provides one indicator of transfer volume and destinations, by showing where students enrolled at a particular campus one fall are enrolled the following fall. Students who transfer during a spring or summer session and do not continue in the fall are missed by this method, as are students who transfer out-of-state or to independent institutions.

The transfer matrix identified 846 students enrolled at PGCC in fall 1993 who were enrolled in fall 1994 at a Maryland public four-year college or university. The most popular transfer destination was the University of Maryland at College Park,

though the number of PGCC transfers to UMCP was the lowest in years. The second most popular transfer destination was the University of Maryland University College. A total of 234 students enrolled at PGCC in fall 1993 were enrolled at UMUC in fall 1994. Third most popular for PGCC transfers was Bowie State University, with 167 students identified as migrating to Bowie over the fall 1993-fall 1994 period.

PGCC Transfers to Maryland Senior Colleges and Universities Fall-to-fall Enrollment Migration			
	1991-92	1992-93	1993-94
Univ. of Maryland College Park	345	293	269
Univ. of Maryland University College	225	242	234
Bowie State University	147	146	167
Univ. of Maryland Baltimore County	67	61	56
Towson State University	50	54	33
Morgan State University	18	17	20
Univ. of Maryland at Baltimore	9	16	18
Salisbury State University	25	26	13
Frostburg State University	12	20	11
Univ. of Maryland Eastern Shore	20	19	10
Coppin State College	2	3	8
University of Baltimore	5	4	4
Saint Mary's College of Maryland	10	5	3
Totals	935	906	846

Examining transfer from PGCC to four-year institutions is an appropriate measure for evaluating a key community college mission. But this exclusive one-way look misses much student movement, including substantial "reverse transfer" from senior institutions to the community college. In recent years, the number of students transferring from senior institutions to PGCC has equalled nearly a third of the total transferring from PGCC to senior institutions. The traffic flow varied by institution. The University of Maryland at College Park, the leading destination of transfers from PGCC, was also the leading source of "reverse transfers" to PGCC in fall 1994. Over

the fall 1993-fall 1994 period, 269 students transferred from PGCC to UMCP while 104 transferred from UMCP to PGCC. An extreme case of the "reverse transfer" phenomenon was Frostburg State University. Four more students transferred from Frostburg to PGCC (15) than from PGCC to Frostburg (11):

Net Transfers, PGCC-Maryland Public Senior Institutions Fall 1993-1994			
	From PGCC to Four-Year	From Four-Year to PGCC	Net Transfers
Univ. of MD-University College	234	43	191
Univ. of MD-College Park	269	104	165
Bowie State University	167	49	118
Univ. of MD-Baltimore County	56	14	42
Towson State University	33	13	20
Univ. of MD at Baltimore	18	1	17
Morgan State University	20	13	7
Coppin State College	8	2	6
Salisbury State University	13	7	6
University of Baltimore	4	1	3
St. Mary's College	3	2	1
Univ. of MD-Eastern Shore	10	11	(1)
Frostburg State University	11	15	(4)
Totals	846	275	571

Analysis. With three campuses of the University of Maryland located in Prince George's County (Bowie State, College Park, and University College), PGCC students have several transfer options close to home. Indeed, nearly four-fifths of PGCC students who transfer to a public university in Maryland attend one of these three. Promoting successful transfer is a major mission of Prince George's Community College. Based on the most recent data available, both the volume and rate of transfer to senior institutions in Maryland are declining.

Planning for Innovation and Change. To promote transfer to three local historically black universities, PGCC has signed agreements with Bowie State University, Howard University, and Morgan State University. The agreements, known as the Connect Program, are intended to improve the transfer rate to these schools and to make the transition for students as smooth as possible. Under the program, students who are ineligible to enroll at the four-year schools due to deficiencies in their high school record or SAT scores are referred to PGCC with the understanding that upon completion of prescribed courses with an appropriate grade point average they are guaranteed admission to the senior institutions.

Performance of Former PGCC Students at Transfer Institutions

How well do PGCC transfers do at senior institutions? Information from the Commission's Transfer Student System (TSS) provides some answers. Four-year, public colleges and universities in Maryland are required to provide the Commission with information concerning transfer student enrollment and performance, such as term of entry, program, cumulative grade point average and credits earned, and bachelor's degree attainment. Transfer students are identified by the receiving institution, and are defined as having transferred in at least 12 credit hours and as having a Maryland community college identified as their last college attended prior to transferring in. The most recent TSS included information about the spring 1994 status of students transferring during the 1989-90 academic year.

Cumulative Grade Point Averages at Maryland Senior Institutions as of Spring 1994 of Community College Students Transferring During 1989-90 (Percentage Distribution)

Grade Point Average	Transfers from Prince George's Community College	All Other Maryland Community College Transfers
0 - .99	4%	5%
1.00 - 1.99	12%	10%
2.00 - 2.99	45%	41%
3.00 - 3.99	34%	40%
4.00	5%	4%
Total students (100%)	899	5,440

A total of 938 former PGCC students were identified as transfers to Maryland public institutions during 1989-90. Grade point averages were available for 899; the remainder withdrew from all courses, took only remedial courses, received all incompletes, took only pass/fail courses, or had some combination of these resulting in a lack of GPA. Eighty-four percent of PGCC's total transfers that year had cumulative GPAs of 2.0 or above as of spring 1994, compared to 85 percent of all Maryland community college transfers.

The Transfer Student System also reported bachelor's degree attainment rates for community college transfers. Degree attainment at senior institutions with at least 20 PGCC transfers during 1989-90 ranged from 22 percent at University College to 73 percent at Towson State University. PGCC students had higher graduation rates than other Maryland community college transfers at Bowie and Towson, but lower rates at Salisbury State University and the Baltimore County, College Park, and University College campuses of the University of Maryland:

Bachelor's Degree Attainment Rates as of Spring 1994 of Community College Transfers during 1989-90

	Transfers from Prince George's Community College	All Other Maryland Community College Transfers
Bowie State University	64% (N=118)	55% (N=53)
Salisbury State University	61% (N=31)	65% (N=259)
Towson State University	73% (N=51)	67% (N=918)
UM-Baltimore County	48% (N=42)	51% (N=886)
UM-College Park	59% (N=383)	63% (N=1,152)
UM-University College	22% (N=240)	26% (N=529)

Analysis. Students transferring from PGCC to public four-year colleges and universities in Maryland on the whole seem to perform satisfactorily, although marginally less well than transfers from other Maryland community colleges.

Planning for Innovation and Change. The college's mentoring and Connect programs are examples of how PGCC strives to enhance the preparation of students for successful transfer to four-year institutions. Strengthening of the college's developmental education program, described below, may also result in better performance of PGCC students at their transfer destinations as well as in coursework at the community college.

Licensure and Certification Examination Results

Graduates of PGCC's health technology programs usually take licensure or certification examinations shortly after graduation. The conventional measure for program evaluation is the pass rate (number passing divided by number tested) of first-time examinees on the entry level exam. Graduates of PGCC's programs in radiography and respiratory therapy have consistently done very well; in some years, every candidate has passed. They continued their good performance in 1995, achieving pass rates of 97 and 94 percent, respectively. Less than half of the college's nuclear medicine graduates passed the examination in 1995; this was the lowest pass rate in the history of the program. During the 1980s it was common for all PGCC nuclear medicine candidates to pass the exam. Graduates of the college's health information technology program achieved an 82 percent pass rate in 1994, the best performance in recent years. Results for the 1995 examination in health information technology will not be available until January 1996.

Pass Rates of PGCC Graduates on Certification Exams
First-time Candidates

	1992	1993	1994	1995
Health Information Technology	67% (N=6)	57% (N=7)	82% (N=11)	N.A.
Nuclear Medicine	78% (N=9)	80% (N=10)	100% (N=13)	46% (N=11)
Nursing	90% (N=77)	80% (N=109)	85% (N=149)	86% (N=98)
Radiography	81% (N=21)	100% (N=15)	97% (N=29)	97% (N=30)
Respiratory Therapy	93% (N=15)	93% (N=14)	100% (N=14)	94% (N=16)

The college's nursing program has had pass rates on the NCLEX-RN exam below national and state averages. After achieving a high point of 90 percent passing in 1992, the pass rate dropped to 80 percent in 1993. It rebounded to 85 percent in 1994 and sustained this level in 1995.

Analysis. The Maryland Board of Nursing expects programs to achieve a minimum pass rate of 85 percent on the licensure examination. The college's graduates have met this standard the past two years. PGCC's nursing department has 90 percent as its minimum target.

Planning for Innovation and Change. In recent years the nursing department has implemented several changes to promote student learning and improve graduate performance on the NCLEX-RN examination. Examples include new admission and progression policies, introduction of interactive software in the new computerized health technology learning center, and revised classroom teaching practices focusing on problem solving and case studies. In addition, students are now required to spend time on drill and practice in the learning laboratory. Examinations in the final course in the nursing sequence are now given on computers, since the NCLEX-RN is now administered exclusively on computer.

Graduate Employment

A quarter of PGCC's students attend to prepare for entry into a new career or update job skills. Students with job-related goals are more likely than other students to complete their PGCC programs. A year after their PGCC graduation, how many of these students are working in jobs related to their community college curriculum?

Eighty-nine percent of the graduates of 1994 were employed when surveyed a year after commencement. Three-fourths were in full-time positions. Seventy-eight percent of the employed graduates were working in jobs related to their community college curriculum. The related-employment rate varied by program. As has consistently been the case, graduates of PGCC's nursing program had success finding related employment, with nine of ten working in nursing positions within a year of graduation. Four-fifths of the 1994 graduates in Business Management were employed in management jobs, a substantial improvement over the related-job rates of earlier classes. Three-fourths of the electronics and computer service graduates had found related employment, a proportion more typical than the unusually low rate reported by 1993 graduates. Three-fifths of the college's graduates in computer technology and information systems found related employment, consistent with the recent past. A similar proportion of the college's accounting graduates were working in jobs related to their PGCC curricula. The college's programs in early childhood education achieved the highest related-employment rate among 1994 graduates--all six graduates were working in related jobs. The prior three surveys had found only

half of the graduates employed in early childhood education jobs. The lowest rates of program-related employment were reported by the 1994 graduates of the college's paralegal and criminal justice programs. The only area with a notable decline in related-employment from last year was allied health, attributable to the fact that only two of the eight responding graduates in Nuclear Medicine had found related jobs.

Related Employment Rates of Career Program Graduates
Selected Program Areas, FY91-94

	FY91	FY92	FY93	FY94
Early Childhood Education	50% (N=10)	50% (N=8)	50% (N=8)	100% (N=6)
Nursing	98% (N=47)	95% (N=42)	91% (N=43)	90% (N=40)
Business Management	55% (N=67)	59% (N=70)	50% (N=56)	80% (N=44)
Electronics/Computer Service	73% (N=11)	73% (N=11)	33% (N=9)	75% (N=8)
Allied Health	100% (N=21)	91% (N=33)	96% (N=27)	74% (N=35)
Computer/Information Systems	61% (N=28)	58% (N=31)	61% (N=23)	63% (N=16)
Accounting	56% (N=18)	86% (N=21)	56% (N=16)	62% (N=21)
Marketing Management	40% (N=5)	40% (N=5)	0% (N=5)	57% (N=7)
Paralegal	46% (N=35)	63% (N=19)	29% (N=17)	55% (N=11)
Criminal Justice	55% (N=11)	50% (N=18)	44% (N=16)	50% (N=16)

Graduates of the prior year's class of 1993 were asked the extent to which completion of their PGCC program helped them get their job, qualify for a promotion, improve job skills, and prepare for a future career. (This question was not included in the statewide survey of 1994 graduates.) A third of the respondents reported that program completion had substantially helped them get their current job or qualify for a promotion. Majorities indicated that their PGCC program had improved their job skills and prepared them for a new career.

PGCC Program Completion Impact on Employment Outcomes Employed Graduates, Class of 1993				
	Extent to which Completing Program Helped Graduate			
	Get Current Job	Qualify for Promotion	Improve Job Skills	Prepare for New Career
5-A great deal	30%	21%	30%	40%
4	5%	13%	24%	21%
3-A fair amount	14%	16%	21%	20%
2	5%	11%	10%	9%
1-Not at all	46%	39%	15%	10%
Substantial help (4,5)	35%	34%	55%	61%
Some help (3,4,5)	49%	51%	75%	81%
Scale mean	2.69	2.67	3.45	3.72
Total respondents (100%)	280	269	275	278

Analysis. Within a year of graduation, most PGCC graduates were employed full-time and those working were typically in jobs related to their PGCC curriculum. Related-employment rates were up for 1994 graduates of most career programs, compared to the success of the prior graduating class of 1993. Only health technology graduates reported less success in securing related employment, and this largely reflected the responses from one program.

Planning for Innovation and Change. The college will continue to monitor the job attainment of its career program graduates. The college has advisory councils for its programs in accounting, computer information systems, construction management, criminal justice technology, drafting technology, early childhood education, electronics engineering/computer service technology, health information technology, hospitality services management, management, nuclear medicine, nursing, office administration, paralegal, radiography, real estate, and respiratory therapy. These advisory councils, composed of practicing professionals in the corporate and public sector, keep program faculty apprised of the latest developments in the job market and in the skills employers expect of college graduates. The college has also embraced use of the formal DACUM (Developing A CUrriculuM) process as a means of responding efficiently and effectively to the need for curriculum development. In addition to

traditional DACUM panels to establish new curricula, PGCC has used the process to assess and enhance existing academic programs.

Graduate Survey Findings

In addition to asking about post-graduation employment and continuing education, statewide graduate follow-up surveys include a number of other questions concerning the student's experience with the community college. Perhaps the most fundamental inquire about the student's primary reason for attending and whether this goal was achieved. In addition to earning an Associate's degree, PGCC graduates primarily sought to prepare for transfer to a four-year college or university, prepare for a career change, or prepare for entry into their first career. Seventy-six percent of PGCC's graduates from 1994 indicated that they had completely achieved their goal in attending the college, up slightly from the 72 percent achievement rate reported by graduates from 1992. Another 19 percent of the 1994 graduates said they had partly achieved their goal in coming to PGCC. Five percent indicated they had not achieved their goal.

Respondents who had continued their studies at a four-year college or university rated their PGCC preparation for transfer highly. Over four-fifths said their preparation had been good or very good. Only four percent gave negative ratings to the community college for its job in helping them get ready for advanced study.

Graduate Ratings of PGCC Preparation for Transfer
(Percent of Survey Respondents)

	1991	1992	1993	1994
Very Good	35%	36%	35%	31%
Good	44	49	48	51
Fair	17	13	15	14
Poor	2	2	1	3
Very Poor	2	1	1	1
Total Respondents (100%)	176	201	151	153

The statewide survey conducted every other year asks graduates who are employed to rate how well the community college prepared them for employment.

The responses from the graduates of 1994 were similar to those given for preparation for transfer, with over four-fifths giving very good or good ratings. The employment preparation ratings were higher than elicited in the surveys of graduates from 1990 and 1992.

Graduate Ratings of PGCC Preparation for Employment (Percent of Survey Respondents)				
	1988	1990	1992	1994
Very Good	33%	28%	30%	31%
Good	48	49	42	52
Fair	16	21	25	15
Poor	2	1	2	1
Very Poor	1	1	1	1
Total Respondents (100%)	310	287	318	199

Analysis. When asked to rate their satisfaction with PGCC and its various programs, survey respondents usually give positive ratings. When the graduates of the class of 1994 were asked, "if you had to do it over again, would you attend this community college?", 87 percent said yes. When asked if they would enroll in the same program, 76 percent said yes. Graduates have consistently rated the preparation they have received from PGCC for immediate employment or further study in very positive terms.

Planning for Innovation and Change. Although customer satisfaction surveys have consistently found most students very pleased with PGCC and its programs and services, the college believes that graduates have been overrepresented in past assessment efforts. During the fall of 1995, current students were surveyed to learn their opinions about the college's student services, such as counseling, registration, and financial aid. It is likely that a version of this survey will become a routine part of the college's assessment program. In addition, the research office is designing a survey of students who exit the college prior to graduation to learn more about these "unexplained leavers." The college suspects that a sizable proportion of these students have achieved their goals at PGCC and should not be counted in attrition statistics as unsuccessful.

Student Evaluation of Teaching

Student evaluation of teaching is a key component of the college's Faculty Professional Growth and Development Plan. Full-time faculty are evaluated by a full-scale evaluation procedure every year for the first five years. Tenured faculty and faculty on annual contracts who have served five years are evaluated every three years of service unless a special evaluation is requested. Full-time faculty who exceed established threshold scores on their previous evaluation may opt for a shorter, more focused package for their periodic evaluation. Evaluation by students is part of the smaller package.

In 1994-95, student evaluations were conducted for 330 teaching faculty. The mean response across all items was 4.3 on a five-point scale. Sixty-seven teachers, or 20 percent of those evaluated, received average student evaluation scores below 4.0. Full-time faculty scoring in this group must, because of their student evaluations, undergo the full-scale evaluation process the next time. Specific student complaints or below-par ratings on certain evaluation items may trigger a conference with instructional administrators which may lead to various faculty remediation activities.

Analysis. Findings from student evaluations of teachers have been remarkably consistent over time. Scale means and the proportion of faculty falling below the threshold for the shorter evaluation process have been essentially unchanged in recent years.

Planning for Innovation and Change. The college is committed to supporting its faculty in their teaching mission. An example is the Faculty Mentor Program, providing teachers with confidential counseling and assistance from designated master teachers to improve their classroom techniques. While student evaluations are an important component of the college's personnel performance assessment program, inclusion of this indicator in a student outcomes assessment is worth reconsideration.

Institutional Indicators

In addition to the mandated common indicators, PGCC has been monitoring basic skills proficiency as measured by placement tests, student enrollment in developmental education, and course pass rates. The first two indicators are especially appropriate for community colleges, since their open admissions policies permit enrollment of students who may be poorly prepared for college work. In addition, many community college students do not have degree or transfer goals. Thus a measure of student achievement at the course level is a useful complement to the traditional graduation and transfer rate measures.

Developmental Education

All of the above measures of student experience and achievement at Prince George's Community College must be interpreted within the context of the college's open admissions policy. The college accepts all applicants who are high school graduates, holders of high school equivalency diplomas, and anyone 16 years of age or older who has left elementary or secondary school. There are no admissions tests or high school rank or grade point average requirements. If you are 16 and want to attend, you can enroll.

To ensure a foundation for college-level instruction, all students seeking enrollment in credit courses are required to demonstrate, either through placement testing or through completion of developmental coursework, basic academic skills proficiency in reading, written expression, and mathematics.

Percent of Prince George's County Public High School Graduates Entering PGCC Each Fall Needing at Least One Developmental Course

	Total Tested in All Three Areas	Needed Remediation	
		Number	Percent
1995	950	635	67%
1994	886	629	71%
1993	945	646	68%
1992	926	630	68%
1991	908	602	66%
1990	1,037	590	57%
1989	1,033	607	59%
1988	1,116	624	56%

Seven in ten students entering the college in fall 1995 needed remediation in at least one basic skill, a proportion similar to that experienced the prior three years. For 1995 graduates of Prince George's County high schools entering PGCC in fall 1995, the proportion needing remediation was two-thirds. This was lower than the

71 percent recorded by 1994 graduates. A fourth of the 1995 graduates of Prince George's County high schools entering PGCC needed remediation in all three areas of reading, English, and mathematics. Two-fifths of the students needed remedial courses in reading; a similar proportion needed English composition. Mathematics was the area of greatest need. Over half of the high school graduates needed remediation in mathematics. Many students need to complete two or more developmental mathematics courses--often starting with beginning arithmetic-- to be ready for, and eligible for, the introductory credit class.

What percentage of students identified as needing remediation enroll in the appropriate developmental courses? What percentage complete remediation? The longitudinal analysis of the fall 1990 entering cohort is illustrative. Five years after entry, approximately two-thirds of the students identified as needing remediation in each basic skill area had taken developmental courses. The percentage completing remediation in each area, however, was considerably lower. Only thirty-five percent of the students needing developmental reading had completed it by the end of spring 1995. The comparable figure for English was 31 percent. Mathematics had the lowest completion rate, partly because a fourth of the students identified as needing remediation were initially placed in a basic arithmetic course. (Students may successfully complete a lower-level developmental class that prepares them for the next developmental class in the sequence. "Developmental completed" as used here means earning a developmental course grade satisfying the prerequisite for introductory credit courses in each area. A student may need to pass two or more developmental classes in a sequence to "complete developmental" in an area.) Only 124 or 13 percent of the 933 students identified as needing developmental mathematics in fall 1990 had completed remediation in math by spring 1995.

Developmental Needs, Coursetaking, and Completion
Fall 1990 Entrants as of the End of Spring 1995

	Reading		English		Mathematics	
	Number	Percent	Number	Percent	Number	Percent
Developmental needed	872	100%	832	100%	933	100%
Developmental course(s) taken	541	62%	589	71%	635	68%
Developmental completed	308	35%	254	31%	124	13%

Analysis. Two-thirds of the students coming to PGCC are deficient in at least one basic skill area. If the fall 1990 entering cohort is representative, substantial numbers of students identified as needing remediation fail to take appropriate developmental classes. Approximately a third (or less) of the students needing remediation complete it within five years of entry to PGCC.

Planning for Innovation and Change. The college has implemented several changes to address the issues revealed by the analysis of developmental studies. Each developmental course now requires students to spend at least 30 hours in the computerized learning laboratory. Despite fiscal constraints, the college has increased the number of full-time faculty and laboratory assistants in educational development during the last two years.

Course Pass Rates

Student performance in individual courses constitutes a fundamental learning outcome. Assessment, reflected in the final course grade, is the responsibility of the faculty member teaching the course. Successful course completion is a prerequisite for progress in a curriculum, and a useful indicator in itself. Examination of student outcomes at the course level is especially appropriate at community colleges, where as many as half the students enrolled in credit courses may have no intention of earning an Associate degree. Course pass rates, the percentage of initial enrollees receiving passing grades, provide a ready means of assessing student course success.

Fall Course Pass Rates by Division				
	1991	1992	1993	1994
Health Technology	91%	92%	95%	92%
Physical and Health Education	90%	86%	85%	85%
Business and Management	82%	83%	82%	84%
Computer/Engineering Technology	80%	80%	80%	81%
Humanities	83%	83%	82%	80%
Social Sciences	76%	78%	75%	78%
English Studies	71%	75%	78%	77%
Science and Mathematics	65%	69%	67%	68%
Educational Development	65%	64%	63%	63%

Analysis. Students passed 77 percent of their classes in fall 1994, matching the all-time high established in 1992. Collegewide pass rates over the 1977-86 period had been stable, at 71-72 percent each fall. Course pass rates have gradually increased since 1986. Pass rates have varied by discipline, with developmental courses and classes in science and mathematics most difficult.

Planning for Innovation and Change. The college's Tutoring Center offers assistance for students in accounting, biology, chemistry, computer information systems, mathematics, and other courses. Services include individual tutoring by appointment, walk-in assistance, and guided small-group study sessions.

Conclusion

This report presented highlights of numerous student outcomes studies conducted by the college's research office, and cited examples of the college's responses to the issues raised by the research findings. The college welcomes reactions to the information presented, and suggestions for improving the assessment and reporting process.